ABSTRACT:

What is described is a magnetoresistive sensor for operation with a magnetized encoder, which is equipped with a zone with magnetic north and south poles arranged alternately along a direction of motion, comprising a Wheatstone bridge configuration with a first bridge arm between a first supply terminal and a first signal output terminal of the Wheatstone bridge configuration, a second bridge arm between the first supply terminal and a second signal output terminal of the Wheatstone bridge configuration, a third bridge arm between a second supply terminal and the first signal output terminal of the Wheatstone bridge configuration, and a fourth bridge arm between the second supply terminal and the second signal output terminal of the Wheatstone bridge configuration, wherein each of the bridge arms comprises an ohmic resistance element with a resistance-value dependence on the magnetic field strength of a magnetic field influencing the ohmic resistance element in accordance with a defined characteristic.

For a further reduction in the spatial dimensions, the characteristics of the ohmic resistance elements in the first and fourth bridge arms are selected to be at least essentially matching with each other and significantly different from the characteristics, selected to be at least essentially matching with each other, of the ohmic resistance elements in the second and third bridge arms.

Fig. 1